

CLAIMS

1. A position locating system comprising a radio receiving base station and a plurality of portable radio transmitter/receiver devices each having means for determining an instantaneous global position for said device and adapted to signal said position to the base station, each device also being adapted to monitor transmissions from other devices within the system and to relay said messages from one device to another, whereby a message from a device out of range of the base station can be relayed to the base station.
2. A position locating system according to Claim 1, wherein said device is a portable cellular telephone handset.
3. A position locating system according to Claim 1 or 2, further comprising switching means adapted to switch communication between the device and said global positioning system and said cellular network, wherein said switching means is activated in response to the signal strength of said global positioning system and said cellular network.
4. A position locating system according to Claim 1 or 2, further comprising switching means adapted to switch communication between the device and said global positioning system and said cellular network, wherein said switching means is activated in response to the accuracy of the position determined by said global positioning system and said cellular network.
5. A position locating system according to any of preceding claim, further comprising trigger means to activate the device to transmit an alarm call to a communications centre.
6. A position locating system according to Claim 5, wherein said trigger means comprises a panic button adapted to transmit a coded signal via a radio transceiver to said device.
7. A position locating system according to Claim 6, wherein said transceiver is adapted to activate other said devices in the vicinity to cause them to transmit an alarm signal.
8. A position locating system according to Claim 5, wherein said trigger means comprises a switch activated by unauthorised movement of equipment provided with a said device.

9. A position locating system according to any preceding claim, further comprising an inertial navigation system to augment the position location capability of the said system.

10. A method of transmitting position data from any one of a plurality of portable radio transmitter/receiver devices to a radio receiving base station, each device having means for determining an instantaneous global position for said device and being adapted to signal said position to the base station, the method comprising monitoring at each device transmissions from other devices within the system and relaying said messages from one device to another, whereby a message from a device out of range of the base station can be relayed to the base station.

11. A method as claimed in Claim 10, wherein each said transmitter/receiver device is a portable cellular telephone handset.

12. A method as claimed in any of Claims 10 or 11, wherein trigger means activate the device to transmit an alarm call to a communications centre.

13. A method as claimed in Claim 12, wherein said trigger means comprises a panic button adapted to transmit a coded signal via a radio transceiver to said device.

14. A method as claimed in Claim 13, wherein said transceiver activates other said devices in the vicinity to cause them to transmit an alarm signal.

15. A method as claimed in Claim 12, wherein said trigger means comprises a switch activated by unauthorised movement of equipment provided with a said device.

16. A method as claimed in any of Claims 10 to 15, further comprising an inertial navigation system to augment the position location capability of the said method.